



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/731,331 | 12/05/2003 | Jung-Chih Tsao | 67,200-1156 | 5064 |

7590 10/02/2007
TUNG & ASSOCIATES
Suite 120
838 W. Long Lake Road
Bloomfield Hills, MI 48302

| |
|----------|
| EXAMINER |
|----------|

ZHENG, LOIS L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1742

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/731,331

Applicant(s)

TSAO ET AL.

Examiner

Lois Zheng

Art Unit

1742

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 September 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-12 and 23-30.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

Continuation of 3. NOTE: Applicant's claim amendments change the scope of the finally rejected claims, which would require further search and consideration.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments regarding the combination of Lakshmikanthan and Oberlitner are not persuasive. First, the front side engaging contact ring of Lakshmikanthan and the backside engaging contacting ring of Oberlitner are both functionally equivalent contact member for providing electrical connection to the wafer during electroplating. Second, the backside contacting ring of Oberlitner would not make the apparatus of Lakshmikanthan inoperable since Lakshmikanthan teaches that its apparatus can provide vacuum to the backside of the wafer, which would have held the wafer in place while electrical contact is made on the backside of the wafer as suggested by Oberlitner. The bowing of the substrate as taught by Lakshmikanthan does not teach away from using a backside engaging contact ring since the bowing of the substrate is directed to one particular way of how the apparatus of Lakshmikanthan is being operated and does not teach away from a process of using Lakshmikanthan's apparatus wherein bowing of the substrate is not required. In fact, when vacuum is applied to the backside of the wafer as taught by Lakshmikanthan, the bowing effect would not occur. Lastly, the examiner is not ignoring the plain meaning of applicant's claim. Instead, the examiner is interpreting applicant's claims based on the broadest reasonable interpretation. When a backside contact ring is engaged in the apparatus of Lakshmikanthan in view of Oberlitner, there will be pressure asserted directly to the peripheral of the wafer by the contacting ring. This pressure decreases at locations further away from the direct point of contact. Therefore, the center of the wafer will feel the pressure of the contact ring pushing against the wafer. Therefore, based on the broadest reasonable interpretation, the contact ring of Lakshmikanthan in view of Oberlitner is a part of a pressure application system that apply a central pressure to a center region of the substrate backside as claimed. Applicant's arguments regarding the combination of Lakshmikanthan in view of Oberlitner and Dordi are not persuasive because the plurality of blowing gas ports incorporated into the apparatus of Lakshmikanthan in view of Oberlitner as suggested by the teachings of Dordi do not render the apparatus of Lakshmikanthan inoperable since the blowing gas can be vacuumed by the central vacuum port and still achieves the intended purpose of preventing backside contamination as taught by Dordi